

## Listing of the Claims

1-7 (Canceled)

8. (Currently Amended) A computer implemented best indicator adaptive (BIA) method for demand forecasting comprising the steps of:

computer-implemented implementing a plurality of forecasting subsystems which make use of indicators Load ( $L$ ), Ship ( $S$ ) and Customer Acceptances (CA) history ( $CA_{hist}$ );

computer-implemented generating a forecast ( $CA_L$ ) from Load ( $L$ ) by modeling the ratio of quarter-to-date load to quarter CA actual as a random variable with gamma distribution so that the CA becomes a variable with generalized gamma distribution and computing the sample mean and sigma of the quarter-to-date load to quarter CA actual ~~Load-to-CA~~ ratio for a final forecasted  $CA_L$  demand;

computer-implemented generating a forecast ( $CA_S$ ) from Ship ( $S$ ) by modeling the ratio of quarter-to-date ship to quarter CA actual as a random variable with gamma distribution so that the CA becomes a variable with generalized gamma distribution and computing the sample mean and sigma of the ~~Ship-to-CA~~ quarter-to-date ship to quarter CA actual ratio for a final forecasted  $CA_S$  demand;

computer-implemented generating a forecast ( $CA_{LS}$ ) from Load and Ship ( $LS$ ) by forecasting Customer Acceptances (CA) based on Load ( $L$ ), Ship ( $S$ ) and Customer Acceptances history ( $CA_{hist}$ ) to generate  $CA_{LS}$  by estimating the functional relationship and the parameters relating the two ratios ~~Load-to-CA~~ quarter-to-date load to quarter CA actual and ~~Ship-to-CA~~ quarter-to-date ship to quarter CA actual;

computer-implemented generating a forecast from Customer Acceptances history ( $CA_{hist}$ );

computer-implemented refining the forecasts based on distribution demand using

Customer Requested Date (CRAD) by

generating a forecast from Load ( $L$ ) and CRAD as  $CA_{L,CRAD}$ ,

generating a forecast from Ship ( $S$ ) and CRAD as  $CA_{S,CRAD}$ , and

generating a forecast from Load ( $L$ ) and Ship ( $S$ ) and CRAD as  $CA_{LS,CRAD}$ ;

for each forecast  $CA_L$ ,  $CA_S$ ,  $CA_{LS}$ ,  $CA_{L,CRAD}$ ,  $CA_{S,CRAD}$ ,  $CA_{LS,CRAD}$ , and  $CA_{hist}$ , determining a forecast error;

computer-implemented eliminating  $CA_{LS}$  and  $CA_{LS,CRAD}$  if data is for a historical period shorter than a predetermined period;

eliminating any other forecast due to expert knowledge;

for all remaining forecasts, selecting a the forecast having a the forecast error that is the smallest error; and

outputting a the selected forecast as an optimum forecast.

9. (Currently Amended) A computer implemented best indicator adaptive (BIA) method for demand forecasting comprising the steps of:

inputting Load ( $L$ ), Ship ( $S$ ) and Customer Acceptances (CA) quarterly history ( $CA_{hist}$ ) data;

computer-implemented implementing a plurality of forecasting subsystems making use of four sources of information, Load ( $L$ ), Ship ( $S$ ), Customer Acceptances quarterly history ( $CA_{hist}$ ), and Customer Request Date (CRAD);

computer-implemented forecasting Customer Acceptances (CA) based on Load ( $L$ ) to generate  $CA_L$  by modeling a ratio of quarter-to-date load to quarter CA actual as a random variable with gamma distribution so that the CA becomes a variable with generalized gamma distribution whose mean and sigma ~~can be~~ are easily computed from the sample mean and sigma of the ~~Load-to-CA~~ quarter-to-date load to quarter CA actual ratio;

computer-implemented forecasting Customer Acceptances (CA) based on Ship ( $S$ ) to generate  $CA_S$  by modeling the ratio of quarter-to-date ship to quarter CA actual as a random variable with gamma distribution so that the CA becomes a variable with generalized gamma distribution whose mean and sigma ~~can be~~ are easily computed from the sample mean and sigma of the ~~Ship-to-CA~~ quarter-to-date ship to quarter CA actual ratio;

computer-implemented forecasting Customer Acceptances (CA) based on Load ( $L$ ), Ship ( $S$ ) and Customer Acceptances history ( $CA_{hist}$ ) to generate  $CA_{LS}$  by estimating the functional relationship and the parameters relating the two ratios ~~Load-to-CA~~ quarter-to-date load to quarter

21 CA actual and Ship-to-CA quarter-to-date ship to quarter CA actual;  
 22 computer-implemented using a log mean to sigma ratio of CRAD distribution, adjusting  
 23 the forecasts  $CA_L$ ,  $CA_S$  and  $CA_{LS}$  to arrive at more accurate forecasts  $CA_{L,CRAD}$ ,  $CA_{S,CRAD}$ , and  
 24  $CA_{LS,CRAD}$ ;  
 25 computer-implemented for each forecast  $CA_L$ ,  $CA_S$ ,  $CA_{LS}$ ,  $CA_{L,CRAD}$ ,  $CA_{S,CRAD}$ ,  $CA_{LS,CRAD}$ ,  
 26 and  $CA_{hip}$  determining a forecast error;  
 27 computer-implemented eliminating  $CA_{LS}$  and  $CA_{LS,CRAD}$  if data is for a historical period  
 28 shorter than a predetermined period;  
 29 eliminating any other forecast due to expert knowledge;  
 30 for all remaining forecasts, selecting a the forecast having a the forecast error that is the  
 31 smallest error; and  
 32 outputting a the selected forecast as an optimum forecast.